

### ABSTRACT OF THE DISCLOSURE

[0129] Recombinant Factor IX characterized by a high percentage of active protein can be obtained in the milk of transgenic animals that incorporate chimeric DNA molecules according to the present invention. Transgenic animals of the present invention are produced by introducing into developing embryos DNA that encodes Factor IX, such that the foreign DNA is stably incorporated in the DNA of germ line cells of the mature animal. Particularly efficient expression was accomplished using a chimeric construct comprising a mammary gland specific promoter, Factor IX cDNA that lacked the complete or any portion of the 5'- untranslated and 3'-untranslated region, which is substituted with a 5-' and 3'- end of the mouse whey acidic protein gene. *In vitro* cell cultures of cells explanted from the transgenic mammal of the invention and methods of producing Factor IX from such said culture and methods of treating hemophilia B are also described.